Amendment and Response
Applicant: Andrew M. Spencer
Serial No.: 10/689,157
Filed: 10/20/2003
Docket No.: 10013891-1/H302.238.101
Title: REMOVABLE INFORMATION STORAE DEVICE THAT INCLUDES A MASTER ENCRYPTION
KEY AND ENCRYPTION KEYS

REMARKS

The following remarks are made in response to the Office Action mailed February 22, 2007 (the "Office Action"). Claims 1-30 remain pending in the application and are presented for reconsideration and allowance in view of the following remarks.

Claim Rejections under 35 U.S.C. § 102

In the Office Action, claims 16, 19-23 and 25-28 were rejected under 35 USC 102(e) as allegedly being anticipated by U.S. Patent Application Publication US2003/0236983A1 to Mihm et al ("Mihm"). Applicant respectfully traverses these rejections.

It is well accept that, to anticipate a claim, the reference relied upon must disclose each claim element. MPEP 2131. Claim 16 recites a portable memory card that includes,

> *a non-volatile memory storage device configured to store one or more encrypted encryption keys and encrypted data; and*

The information storage device recited in claim 25 includes similar limitation. Referring to paragraph 0034 of Mihm, the Office Action first states that Mihm teaches a non-volatile memory configured to store one or more encrypted encryption keys and encrypted data. Paragraph 0034 of Mihm reads as follows:

> [0034] In one embodiment, in FIG. 1, an encrypted unique identification number (EUID) 162 is stored on the rewriteable non-volatile memory 160. The EUID 162 is formed by encrypting the UID 152, for example with a master encryption key as discussed more fully below. In some applications, the UID 152 is encrypted by a service provider, for example during an initialization process, whereupon the service providers sends the encrypted UID (EUID) 162 to the device for storage in memory, for example in non-volatile memory.

The cited portion of Mihm thus fails to disclose encrypted encryption keys and encrypted data on the memory 160. The portion of Mihm reproduced above only refers to an encrypted unique identification number (EUID) stored on the memory 160. Since the cited portion of Mihm fails to disclose encrypted encryption keys and encrypted data stored by the memory device, it cannot anticipate claims 16 or 25, or any claims dependent thereon.

Amendment and Response
Applicant: Andrew M. Spencer
Serial No.: 10/689,157
Filed: 10/20/2003
Docket No.: 10013891-1/H302.238.101
Title: REMOVABLE INFORMATION STORAE DEVICE THAT INCLUDES A MASTER ENCRYPTION
KEY AND ENCRYPTION KEYS

Claim 16 further recites

> *a card controller system coupled to the memory storage device
> configured to store and retrieve the encrypted encryption keys and the
> encrypted data from the memory storage device, wherein the encryption keys
> are encrypted and decrypted using a master encryption key and the data is
> encrypted and decrypted using the encryption keys.*

The Office Action cites paragraphs 0034-0035 and claims 7 and 13 of Mihm with
regards to this claim element. However, none of these cited portions of Mihm appear to
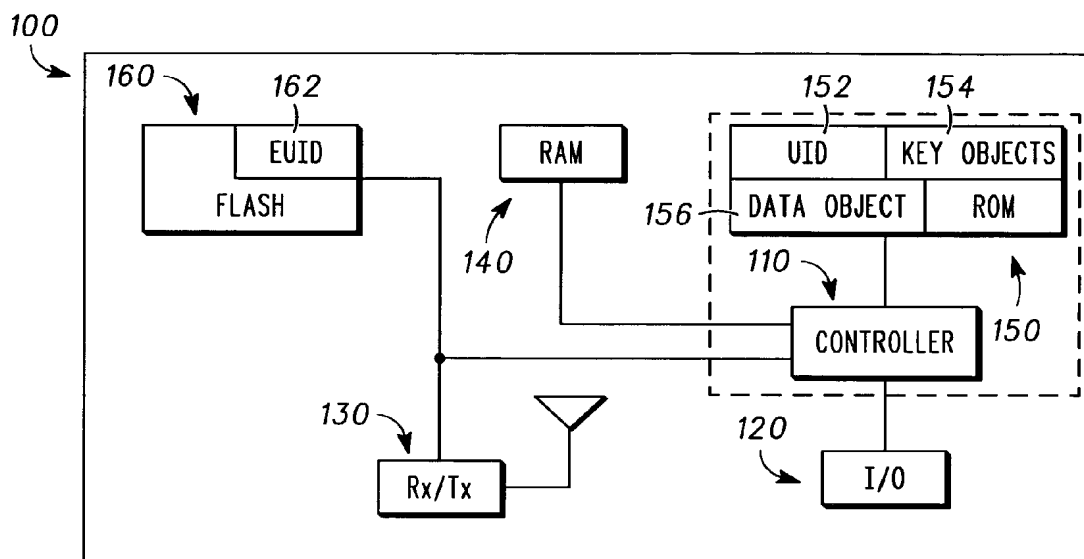disclose the recited claim element. Figure 1 of Mihm is reproduced below.

FIG.1

As noted above and referring to Figure 1 of Mihm, Mihm refers to an encrypted
unique identification number (EUID) 162 stored in the NV memory 160. In paragraph 0035,
Mihm goes on to teach "a service provider may use the UID of a particular cellular or
wireless subscriber to generate an encryption key used to encrypt data sent to the subscriber,
wherein only the cellular subscriber having the UID will be able to decrypt the encrypted
data."

Amendment and Response
Applicant: Andrew M. Spencer
Serial No.: 10/689,157
Filed: 10/20/2003
Docket No.: 10013891-1/H302.238.101
Title: REMOVABLE INFORMATION STORAE DEVICE THAT INCLUDES A MASTER ENCRYPTION
KEY AND ENCRYPTION KEYS

Thus, the EUID itself is not considered a "key" by Mihm, but rather, it appears that the UID is encrypted using a master key, and the UID may be used to generate a key. To the extent that the EUID is just encrypted data, the cited portions of Mihm do not appear to disclose encrypting and decrypting the UID using the key objects 154 stored in the ROM 150.

Thus, the cited portions of Mihm fail to disclose a card controller system configured to store and retrieve encrypted encryption keys and encrypted data from the memory storage device. These portions of Mihm further fail to disclose encryption keys are encrypted and decrypted using a master encryption key and data is encrypted and decrypted using the encryption keys.

Since Mihm fails to disclose each element of claims 16 and 25, it cannot anticipate claims 16 and 25, or any claims dependent thereon.

The Office Action does not specifically address the individual elements of independent method claims 27 and 28, but rather, refers to the rejection of claim 16 in rejecting claims 27 and 28. Per this rationale, claims 27 and 28 are also allowable for the reasons set forth with regards to claims 16 and 25 herein above.

In light of the above, Applicants respectfully request withdrawal of the rejection of claims 16, 19-23 and 25-28.

Claim Rejections under 35 U.S.C. § 103

In the Office Action, claims 1-15, 17, 18, 24 and 29-30 were rejected under 35 USC 103(a) as allegedly being unpatentable over Mihm and further in view of other U.S. Patent references. Applicant respectfully traverses these rejections.

Claims 17 and 18 depend on claim 16, which is believed to be allowable as set forth above. Claims 17 and 18 are therefore allowable for at least the same reasons. Claims 29 and 30 both depend from claim 28, which is also believed to be in condition for allowance as noted above. Claims 29 and 30 are therefore allowable for at least the same reasons. The remaining rejections are addressed below.

To establish a *prima facie* case of obviousness, the combined references must disclose or suggest each claim element. MPEP 2143. The combination of Mihm and Fujita fails to disclose each element of at least independent claims 1 and 24. Claim 1 is directed to a removable information storage device that includes,

9

Amendment and Response
Applicant: Andrew M. Spencer
Serial No.: 10/689,157
Filed: 10/20/2003
Docket No.: 10013891-1/H302.238.101
Title: REMOVABLE INFORMATION STORAE DEVICE THAT INCLUDES A MASTER ENCRYPTION
KEY AND ENCRYPTION KEYS

> a non-volatile memory configured to store a master encryption key;
and
> a non-volatile magnetic memory configured to store encryption keys
which have been encrypted using the master encryption key and to store data
which has been encrypted using the encryption keys.

Referring to paragraph 0034 of Mihm, the Office Action states that Mihm teaches "a non-volatile memory configured to store a master encryption key." Paragraph 0034 of Mihm refers to Figure 1 thereof, which is reproduced below.
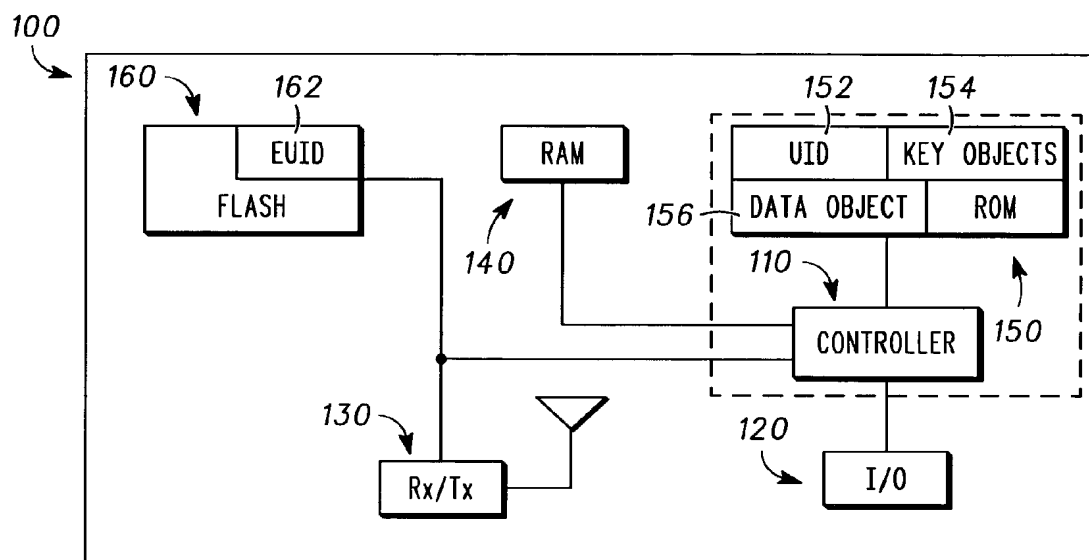

FIG.1

The ROM 150 shown in Figure 1 of Mihms includes "key objects" 154. It appears the Office Action equates the ROM 150 storing key elements 154 with the non-volatile memory configured to store a master encryption key recited in claim 1. The Office Action goes on to state that Mihm teaches "a non-volatile magnetic memory configured to store encryption keys which have been encrypted using the master encryption key and to store data which has been encrypted using the encryption keys," citing paragraph 0034 and claims 7 and 13 of Mihm.

10

Amendment and Response
Applicant: Andrew M. Spencer
Serial No.: 10/689,157
Filed: 10/20/2003
Docket No.: 10013891-1/H302.238.101
Title: REMOVABLE INFORMATION STORAE DEVICE THAT INCLUDES A MASTER ENCRYPTION
KEY AND ENCRYPTION KEYS

Paragraph 0034 of Mihm teaches an encrypted unique identification number (EUID) 162 stored in a flash memory 160. There does not appear to be a mention in the cited portions of Mihm regarding encrypting data using the EUID and storing such encrypted data in the memory 160. Moreover, it appears that Mihm actually teaches away from the EUID being an encrypted key. Rather, in paragraph 0035, Mihm teaches using the UID to *generate* an encryption key.

Claim 1 includes a non-volatile magnetic memory configured to store encrypted encryption keys and data which have been encrypted using the encryption keys. Mihm fails to disclose or suggest a memory storing encrypted keys, or storing data encrypted by such keys.

Therefore, Applicant respectfully submits the Office Action fails to establish *prima facie* obviousness of claim 1, and as such, claim 1 is in condition for allowance. Claims 2-15 all ultimately depend from claim 1 and are thus allowable for at least the same reasons.

Claim 24 includes

> a memory storage device comprising an atomic resolution storage device including a field emitter, a media and a micromover, the atomic resolution storage device configured to store the encryption keys after the encryption keys are encrypted using the master encryption key and to store data after the data is encrypted using the encryption keys;

The Office Action admits that Mihm fails to disclose an atomic resolution storage device. However, as noted above with regards to the rejection of claim 1, Mihm further fails to disclose any memory configured to store the encryption keys after the encryption keys are encrypted using the master encryption key and to store data after the data is encrypted using the encryption keys.

As noted above, the EUID 162 stored in the memory 160 shown in Figure 1 of Mihm does not appear to meet the limitation of an encryption key. The EUID is not used to encrypt data that is stored in the memory 160. Thus, the cited combination of references fails to disclose each element of claim 24.

Amendment and Response
Applicant: Andrew M. Spencer
Serial No.: 10/689,157
Filed: 10/20/2003
Docket No.: 10013891-1/H302.238.101
Title: REMOVABLE INFORMATION STORAE DEVICE THAT INCLUDES A MASTER ENCRYPTION
KEY AND ENCRYPTION KEYS

CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-30 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-30 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Steven E. Dicke at Telephone No. (612) 573-2000, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

Respectfully submitted,

Jerry B. Decime

By his attorneys,

DICKE, BILLIG & CZAJA, PLLC
Fifth Street Towers, Suite 2250
100 South Fifth Street
Minneapolis, MN 55402
Telephone: (612) 767-2504
Facsimile: (612) 573-2005

Date: May 22, 2007

 /Steven E. Dicke/
Steven E. Dicke
Reg. No. 38,431

12